CONTENTS OF VOLUME 105C

Vol. 105C, *No.* 1

Mini Review

S. E. MacGregor and J. M. Walker — 1 — Inhibitors of the Na^+, K^+-ATPase

General Papers

H. Barreteau, F. Goudey-Perrière, C. Perrière, C. Jacquot, P. Gayral, J. M. Grosclaude and P. Brousse-Gaury — 11 — Influence of fasting and isolation on biogenic amine levels in the nervous system of the male cockroach *Blaberus craniifer* Burm. (Dictyoptera, Blaberidae)

S. Hayashi, M.-Q. Tang, T. Hirakawa and S. Yamada — 17 — Effect of high concentration of ammonia on cultured hepatocytes of eel (*Anguilla japonica*)

M. Morales, C. Sierra, A. Vidal, J. del Castillo and D. S. Smith — 25 — Pharmacological sensitivity of the articular capsule of the primary spines of *Eucidaris tribuloides*

R. Sharma, H. Ahmad, S. S. Singhal, M. Saxena, S. K. Srivastava and Y. C. Awasthi — 31 — Comparative studies on the effect of butylated hydroxyanisole on glutathione and glutathione S-transferases in the tissues of male and female CD-1 mice

K. Stefanov, B. Budevska, O. Ivanov, N. Genov, St. Andreev and S. Popov — 39 — Lipid and amino acid changes in the mussel *Pseudoanodonta complanata* caused by water pollution

D. Branca, M. S. Roberti, A. Venudo, P. Arsie, B. Simonato and G. Scutari — 43 — Effects of diltiazem on the calcium accumulation and ATP synthesis simultaneously sustained by isolated rat heart mitochondria

A. de Zwaan, O. Cattan and V. M. Putzer — 49 — Sulfide and cyanide induced mortality and anaerobic metabolism in the arcid blood clam *Scapharca inaequivalvis*

N. A. Khan — 55 — Toxicity, metabolism and distribution of lindane in lepidopterous larvae

N. A. Khan — 63 — Activation of ^{14}C-dimethoate in lepidopterous larvae

R. A. Nicholson and M. F. Williams — 69 — Sub-chronic administration of ethanol to mice does not modify the inhibitory effects of dieldrin, abamectin and the dihydropyrazole RH-3421 at their respective sites of action in the nervous system

K. Zaman, W. Zaman and H. Siddique — 73 — Hematological and enzymatic results of aluminum intoxication in rats

M. B. Hansen and B. M. Jaffe — 77 — Involvement of eicosanoids and inositol 1,4,5-trisphosphate in serotonin-induced secretion in rat ileum *in vivo*

T. Mikolajczyk, C. Weil and B. Breton — 83 — Nicotine stimulates maturational gonadotropin (GtH_2) release from carp (*Cyprinus carpio* L.) pituitary cells

M. L. R. Macedo, L. B. da S. Andrade, R. A. Moraes and J. Xavier-Filho — 89 — Vicilin variants and the resistance of cowpea (*Vigna unguiculata*) seeds to the cowpea weevil (*Callosobruchus maculatus*)

J. T. Borlakoglu and J. P. G. Wilkins — 95 — Metabolism of di-, tri-, tetra-, penta- and hexachlorobiphenyls by hepatic microsomes isolated from control animals and animals treated with Aroclor 1254, a commercial mixture of polychlorinated biphenyls (PCBs)

J. T. Borlakoglu and J. P. G. Wilkins 107 Metabolism of di-, tri- and tetrabromobiphenyls by hepatic microsomes isolated from control animals and animals treated with Aroclor 1254, a commercial mixture of polychlorinated biphenyls (PCBs)

J. T. Borlakoglu and J. P. G. Wilkins 113 Correlations between the molecular structures of polyhalogenated biphenyls and their metabolism by hepatic microsomal monooxygenases

J. T. Borlakoglu and J. P. G. Wilkins 119 Microsomal oxidation of bromo-, chloro- and fluorobiphenyls

G. M. Grigorjeva and N. V. Konitcheva 127 Butyrylcholinesterase in the visual ganglia of the squid *Todarodes sagittatus* L. (Cephalopoda). Isolation, molecular forms, interaction with substrates and inhibitors

Vol. **105C**, *No.* **2**

Mini Reviews

M. Yamazaki 141 Antitumor and antimicrobial glycoproteins from sea hares

N. J. Tublitz 147 Steroid-induced transmitter plasticity in insect peptidergic neurons

General Papers

F. Punzo 155 Detoxification enzymes and the effects of temperature on the toxicity of pyrethroids to the fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae)

K. Takahashi, Y. Akiba and M. Horiguchi 159 Sex-related differences of hepatic microsomal mixed function oxidase system and antibody production in broilers implanted with corticosterone and/or fed ascorbic acid

I. S. A. Neuman, P. S. Heijmen, R. C. Peters and G. S. F. Ruigt 165 Fish electroreception as a model for vincristine-induced neuropathies and a possible preventive role for ORG 2766 treatment

M. Manzano, P. Romandini, M. de Bertoldi, M. Beltramini, B. Salvato and I. Cozzani 175 Interaction among heavy metals and methanol affecting superoxide dismutase activity in *Saccharomyces cerevisiae*

A. Chiba and S. Chichibu 179 Changes of ^{31}P metabolism during mucus secretion in the slug (*Incilaria bilineata*)

D. E. Santos and H. Takeuchi 185 Influence of the drugs for membrane excitability modification on the excitation caused by achatin-I

T. Piek, B. Hue, H. Le Corronc, P. Mantel, M. Gobbo and R. Rocchi 189 Presynaptic block of transmission in the insect CNS by mono- and di-galactosyl analogues of Vespulakinin 1, a wasp (*Paravespula maculifrons*) venom neurotoxin

H. C. da Silva, H. S. G. Medina, E. Fanta and M. Bacila 197 Sub-lethal effects of the organophosphate Folidol 600 (methyl parathion) on *Callichthys callichthys* (Pisces: Teleostei)

J. M. Lawrence, W. D. Mahon, W. Avery and M. Lares 203 Concentrations of metals in *Luidia clathrata* and *Luidia senegalensis* (Echinodermata: Asteroidea) in Tampa Bay and the nearshore Gulf of Mexico, Florida

N. Schultz, L. Norrgren, J. Grawé, A. Johannisson and Ö. Medhage 207 Micronuclei frequency in circulating erythrocytes from rainbow trout (*Oncorhynchus mykiss*) subjected to radiation, an image analysis and flow cytometric study

P. Allen 213 Effects of acute exposure to cadmium (II) chloride and lead (II) chloride on the haematological profile of *Oreochromis aureus* (Steindachner)

L. De Petrocellis, V. Di Marzo, C. Gianfrani and R. Minei	219	Arachidonic acid, protein kinase C activators and bud formation in *Hydra vulgaris*
S. Daniels and C. J. Duncan	225	Cellular damage in the rat heart caused by caffeine or dinitrophenol
J. G. Rubin and D. M. Soderlund	231	Binding of [^{3}H]batrachotoxinin A-20-α-benzoate and [^{3}H]saxitoxin to receptor sites associated with sodium channels in trout brain synaptoneurosomes
C. L. McKenney, Jr and D. M. Celestial	239	Variations in larval growth and metabolism of an estuarine shrimp *Palaemonetes pugio* during toxicosis by an insect growth regulator
J. Howl and M. Wheatley	247	Hepatic vasopressin receptors (VPRs) exhibit species heterogeneity—absence of VPRs in sheep liver
C. Cubria, M. Alvarez-Bujidos, A. Negro, R. Balaña-Fouce and D. Ordóñez	251	4′,6-diamidino 2-phenylindole is a new reversible inhibitor of diamine oxidase and *S*-adenosyl-L-methionine decarboxylase from mammalian tissues
S. Magdelaine and C.-R. Marchand	255	Neuropeptide-like substances in the retina of intact and tentaculectomized snails
M. Martínez, A. Torreblanca, J. del Ramo, A. Pastor and J. Díaz-Mayans	263	Cadmium induced metallothionein in hepatopancreas of *Procambarus clarkii*: quantification by a silver-saturation method
C. Maslinski, D. Kierska, W. A. Fogel, A. Kinnunen and P. Panula	269	Histamine: its metabolism and localization in mammary gland
I. Kakuta and S. Murachi	275	Changes of iron content in eels (*Anguilla japonica*) infected with atypical *Aeromonas salmonicida*
A. Hirashima and M. Eto	279	Effect of stress on levels of octopamine, dopamine and serotonin in the American cockroach (*Periplaneta americana* L.)
K. Gromysz-Kałkowska and E. Szubartowska	285	Toxicity of tetrachlorwinfos to *Rana temporaria* L.
W. Lüschen, A. Willig and P. P. Jaros	291	The role of biogenic amines in the control of blood glucose level in the decapod crustacean, *Carcinus maenas* L.
G. Venturini	297	Dopamine sensitive adenylate cyclase in planaria *Dugesia gonocephala*
J. A. Benson, L. Kaufmann, B. Hue, M. Pelhate, F. Schürmann, L. Gsell and T. Piek	303	The physiological action of analogues of philanthotoxin-4.3.3 at insect nicotinic acetylcholine receptors
N. J. D. Wright and R. J. Walker	311	The action of four proposed chloride movement modifiers on acetylcholine responses of central neurones of *Helix aspersa*
A. A. Al-Jafari	323	Investigation of the reversible inhibition of camel (*Camelus dromedarius*) acetylcholinesterase by tetracaine

***Vol.* 105C, *No.* 3**

Mini Reviews

G. E. Nilsson and P. L. Lutz	329	Role of GABA in hypoxia tolerance, metabolic depression and hibernation—possible links to neurotransmitter evolution
E. W. Haeffner	337	Diacylglycerol: formation and function in phospholipid-mediated signal transduction
S. M. Naqvi and C. Vaishnavi	347	Bioaccumulative potential and toxicity of endosulfan insecticide to non-target animals

General Papers

I. A. Ahmed, P. M. Hopkins and W. Winlow	363	Caffeine and ryanodine differentially modify a calcium-dependent component of soma action potentials in identified molluscan (*Lymnaea stagnalis*) neurones *in situ*
N. Takeda	373	Simultaneous analyses of monoamines and their metabolites in urine specimens of patients with neuroblastoma
B. Oppert, T. D. Morgan, C. Culbertson and K. J. Kramer	379	Dietary mixtures of cysteine and serine proteinase inhibitors exhibit synergistic toxicity toward the red flour beetle, *Tribolium castaneum*
S. M. Mahmod and H. Huddart	387	Calcium dependence of electrical and mechanical activity in rat ileum examined by the sucrose-gap technique
K. Y. H. Lagerspetz, A. Tiiska and K. E. O. Senius	393	Low sensitivity of ciliary activity in the gills of *Anodonta cygnea* to some ecotoxicals
Aye-Kyaw, Khin Thandar Win, Lei Lei Oo and Tin Oo	397	Cholera toxin: radio-iodination and uptake by the intestine of suckling rats
C. Canicatti and P. Roch	401	Erythrocyte membrane structural features that are critical for the lytic reaction of *Spirographis spallanzani* coelomic fluid hemolysin
J. L. Ram and J. U. Walker	409	Effects of deionized water on viability of the zebra mussel, *Dreissena polymorpha*
P. Kerambrun, M. Thessalou-Legaki and G. Verriopoulos	415	Comparative effects of environmental conditions, in eutrophic polluted and oligotrophic non-polluted areas of the Saronikos Gulf (Greece), on the physiology of the copepod *Acartia clausi*
P. L. M. Van Dijk, G. E. E. J. M. Van den Thillart and S. E. Wendelaar Bonga	421	The influence of gradual water acidification on the oxygen consumption pattern of fish
N. Kitabatake, E. Doi and A. B. Trivedi	429	Toxicity evaluation of the mycotoxins, citrinin and ochratoxin A, using several animal cell lines
N. Bourhim, Ph. Cantau, P. Giraud and E. Castanas	435	Comparative thermodynamics of opioid receptor ligand interaction in the bovine adrenal medulla membranes— evidence of opioid site heterogeneity
C. J. Church, S. F. Abd-Elghafar and C. O. Knowles	443	Influence of formamidines on batrachotoxin in a 20α-benzoate binding to neural membranes from pyrethroid susceptible and resistant tobacco budworm moths *Heliothis virescens*
H. Fujinami, K. Komabayashi, T. Izawa, K. Suda and M. Tsuboi	451	*In vivo* adaptative regulation of muscarinic receptors and muscarinic stimulation-induced Ca^{2+} mobilization during short-term heat exposure in rat parotid glands
M. J. Gentle and L. N. Hunter	459	Neurogenic inflammation in the chicken (*Gallus gallus var domesticus*)
F. I. Alohan	463	Responses of two proboscis muscles of *Neptunea antiqua* (Mollusca) to some calcium antagonist drugs
Y. Fujisawa, T. Ikeda, T. Takahashi, Y. Furukawa, Y. Muneoka, S. Matsumoto, H. Kuniyoshi and A. Suzuki	471	Effects of several peptides with Pro–Arg–Leu–NH_2 C-terminal sequence on invertebrate muscles
H. Kimura, A. Miyamoto, S. Kawana and H. Ohshika	479	Characterization of α_1-adrenoceptors which mediate chronotropy in neonatal rat cardiac myocytes
Z. A. Damanhouri and O. S. Tayeb	487	A comparative study of liver mixed function oxidases in camels (*Camelus dromedarius*), guinea pigs (*Cavia porcellus*) and rats (*Rattus norvegicus*)

V. Brock and A. Brock	493	Increased 5-aminolevulinic acid (ALA) in heavy metal exposed bivalve molluscs, *Cerastoderma edule*: An effect due to inhibition of porphobilinogen synthase?
T.-S. Chin and H.-C. Chen	501	Toxic effects of mercury on the hard clam, *Meretrix lusoria*, in various salinities
K. Eriksson, M. Reuter and O. Timoshkin	509	Analysis of catecholamines in turbellarians of Lake Baikal
V. Nassar-Gentina, C. Bonansco and M. Luxoro	513	Ionic components of the electrical response of chromaffin cells from the toad (*Caudiverbera caudiverbera*) adrenal gland
M. K. Yunmbam and J. F. Roberts	521	*In vivo* evaluation of reuterin and its combinations with suramin, melarsoprol, DL-α-difluoromethylornithine and bleomycin in mice infected with *Trypanosoma brucei brucei*
M. Bagchi, E. Hassoun, P. Akubue, D. Bagchi and S. J. Stohs	525	Comparative effects of endrin on hepatic lipid peroxidation and DNA damage, and nitric oxide production by peritoneal macrophages from C57BL/6J and DBA/2 mice
N. E. Lamash, E. M. Karaseva and Yu S. Khotimchenko	531	Alteration of starfish oocyte adenylate cyclase properties in gametogenesis
M. B. Bennett	535	Vascular reactivity of the efferent branchial arteries of the lemon shark, *Negaprion queenslandicus*
P. M. Zhadan and M. A. Vaschenko	543	Effect of diesel fuel hydrocarbons on embryogenesis and $^{45}Ca^{2+}$ uptake by unfertilized eggs of sea urchin, *Strongylocentrotus intermedius*
M. A. Saleem and A. R. Shakoori	549	Effect of cypermethrin on the free amino acids pool in an organophosphorus-insecticide-resistant and a susceptible strain of *Tribolium castaneum*